

CHAPTER 6
OPERATOR EXPOSURE MONITORING
(Determining Compliance with
30 C.F.R. §§ 56/57.5002)

Chapter 6

Table of Contents	Page
I. Introduction	6-3
II. Surveys	6-3
III. Frequency of Surveys	6-4
IV. Verification	6-5
V. Inspection Procedures	6-6

Chapter 6 Appendices

Table of Contents	Page
Appendix 6A 30 C.F.R. §§ 56/57.5002 Sample Compliance Checklist.....	6A-1
Appendix 6B Scenarios.....	6A-2
Appendix 6C Example Citations and Terminations	6A-5

CHAPTER 6

OPERATOR EXPOSURE MONITORING

(Determining Compliance with 30 C.F.R. §§ 56/57.5002)

I. Introduction

The standards at 30 C.F.R. §§ 56/57.5002, Exposure Monitoring, is broadly worded and are performance-based requiring an operator to conduct dust, gas, mist, and fume surveys as frequently as necessary to determine the adequacy of control measures. A mine operator has the primary responsibility for protecting the health of miners and must comply with the exposure monitoring standards to ensure that miners are not exposed to harmful concentrations of airborne contaminants.

When determining compliance, the inspector must determine whether surveys are being conducted and, if so, whether the surveys are adequate and conducted as frequently as necessary in a manner consistent with the protective purpose of the standard. The exposure monitoring standards only apply to the airborne contaminants covered under 30 C.F.R. §§ 56/57.5001(a) chemical substances, and (b) asbestos.

Compliance should be evaluated using an objective test: What actions would a reasonably prudent person familiar with all the facts, in particular those specific to the mining industry, take in order to provide the protection intended by the standard?

Consultation with the Agency's Health Specialists and/or Industrial Hygienists is always an option to assist in determining compliance.

II. Surveys

Surveys are defined as any information collection method that:

- Yields information as to a miner's exposure to airborne contaminants, and/or,
- Yields information as to the effectiveness of controls in reducing exposures to airborne contaminants.

The exposure monitoring standards do not specify the type of surveys that operators must conduct. Surveys may be quantitative or qualitative. The following are examples of the different types of surveys that may be conducted by an operator that should be taken into consideration by the inspector when evaluating compliance with sections §§ 56/57.5002. Surveys may be conducted by the operator or may also be conducted by a third party (e.g., consultant, insurance company, etc.). However, any survey or sampling conducted by MSHA cannot be used by the operator to satisfy the requirements of sections §§ 56/57.5002.

1. **Exposure sampling:** exposure sampling is a quantitative survey that provides a measurement of miners' exposures to airborne contaminants. Operators may collect air samples to determine if miners' exposures exceed the threshold limit values (TLVs) in accordance with sections §§ 56/57.5001(a) or the permissible exposure limit (PEL) for asbestos in accordance with sections §§ 56/57.5001(b). Exposure sampling should be conducted in accordance with established scientific principles, such as developed by

- MSHA, NIOSH, OSHA, or equivalent sampling and analytical methods. Wipe samples are also a quantitative survey that can provide information about presence of a hazard. Although wipe samples can provide information on potential exposures, they do not provide an actual measurement of exposures to airborne contaminants.
2. **Workplace inspection:** a workplace inspection is an example of a qualitative survey and can include a walk-through visual inspection before or during a shift with a focus on observing or identifying potential hazards that can lead to an overexposure to airborne contaminants. For example, if a workplace inspection reveals that a cloud is rising from a processing tank, then a potential for an overexposure to an acid mist may be present.
 3. **Inspecting equipment and controls:** inspecting equipment and controls to ensure performance is in accordance with the manufacturer's specifications is a type of qualitative survey. This type of survey can include scheduled or routine maintenance of the equipment. This type of survey not only focuses on mining equipment, such as drills, but should also include equipment used to control or reduce exposures. Such equipment includes dust collectors, ventilation systems, and early warning devices.
 4. **Injury, illness, or incident tracking reports:** an injury, illness, or incident report can be a survey for determining the adequacy of controls because these reports may identify potential exposure to harmful levels of airborne contaminants.
 5. **Miner input:** a miner who attends or participates in inspections, safety meetings, or interviews and briefings may provide information on possible exposure to harmful levels of airborne contaminants.
 6. **Occupational health assessment:** occupational health assessments include medical surveillance that can provide information as to potential exposures. Examples include tests for blood lead levels, chest X-rays, spirometry, etc.
 7. **Other survey methods:** may also be used by the operator to determine whether controls are adequate in protecting miners from harmful exposure to airborne contaminants.

III. Frequency of Surveys

The exposure monitoring standards require that surveys be conducted “as frequently as necessary” to determine the adequacy of the control measures. The following criteria should be taken into consideration by the inspector when evaluating whether surveys are being conducted “as frequently as necessary.”

1. If either MSHA or operator exposure sampling results are approaching the existing applicable TLV in accordance with sections §§ 56/57.5001(a), or the PEL under sections §§ 56/57.5001(b), then more frequent sampling may be needed.
2. A job or equipment change may require an increase in the frequency of inspections. This includes a change in job classification, job task, or personnel; an increase in a production schedule or rate, or an increase in the number of shifts or shift duration; or a change in the equipment used during a job. A change in equipment includes the addition, removal,

or change to any equipment used to control exposures. For example, if the operator installs a new local exhaust ventilation system (LEV) to reduce exposures to dusts, then more frequent surveys may be required to verify that the system is functioning properly.

3. A change in the presence of potential airborne contaminants may require more frequent surveys. In general, this includes a change in the identity, quantity, or physical characteristics of the airborne contaminants. A change in mining operations or specific processes may result in a change in the characteristics of an airborne contaminant which may require more frequent surveys. For example, if the temperature of a process increases, more gas may be released, thus requiring more frequent surveys.
4. An issue identified during an inspection, or routine or special maintenance of equipment including the engineering controls, may require more frequent surveys. For example, if an inspection, or routine maintenance, indicates that a dust collection system is not working properly, e.g., leaking, or not performing according to the manufacturer's specification, then more frequent surveys may be warranted.
5. Miner-identified issues or complaints or miner-reported illness or injuries may suggest the need for more frequent surveys.

IV. Verification

The exposure monitoring standard does not require recordkeeping. However, the following are examples of what an inspector should look for to determine if surveys are being conducted.

1. **Exposure sampling records:** An operator's exposure sampling records may be used to show that surveys are being conducted. Note that any records provided by the operator cannot be used to determine compliance with the TLVs or PEL under sections §§ 56/57.5001(a) or (b).
2. **Maintenance records:** Records showing inspection or maintenance of equipment, especially equipment used to control hazards, may be used to show that surveys are being conducted.
3. **Workplace inspection records:** Any records of workplace inspections may be used to show that surveys are being conducted.
4. **Injury, illness, and/or incident tracking reports:** These reports can also be used as evidence that surveys are being conducted.
5. **Interviews:** Inspectors can ask operators and miners of their knowledge of surveys. Inspectors can ask about the type of surveys being conducted, the jobs that are surveyed, the air contaminants that are monitored, and how often surveys are conducted. This information may be used to show that surveys are or are not being conducted.
6. **Visual inspection:** The appearance of the work area may help inspectors determine if surveys are being conducted. For example, the presence of visible dust, or accumulations or spillage of potential airborne contaminants may indicate that surveys are not being conducted or are not conducted as frequently as necessary.

V. Inspection Procedures

1. Inspectors should first determine which airborne contaminants under §§ 56/57.5001(a) or (b) the operator is required to survey. This can be done through MSHA's exposure sampling, review of the safety data sheets (MSDSs), or a visual inspection of the contaminants or conditions on site. Note: The inspector does not need to demonstrate an exposure over the TLV or PEL under sections §§ 56/57.5001(a) or (b) to determine compliance with §§ 56/57.5002. Compliance under §§ 56/57.5002 should be evaluated under the reasonably prudent person criterion, i.e., what actions a reasonably prudent person familiar with all the facts, including those peculiar to the mining industry, would take in order to provide the protection intended by the standard?
2. Inspectors should next determine whether surveys are being conducted by the operator.
3. Inspectors should also determine the types of surveys that are being conducted for the airborne contaminants identified in the first step. Identification or verification of the types of surveys can be achieved using the examples provided in sections II and IV, respectively.
4. The inspector should also determine if the surveys are adequate. Previous sampling completed by MSHA can provide information as to the adequacy of surveys. For example, if MSHA sampling indicates an exposure near or above the TLV/PEL and the operator is only conducting visual inspections as surveys, then these surveys alone may not be sufficient to determine the adequacy of control measures. In addition, the following two measures may provide information as to the adequacy of surveys.
 - a. Whether surveys are being conducted by a person that is properly trained.
 - b. Whether exposure sampling, consisting of air or wipe samples, is being conducted in accordance with established scientific industrial hygiene principles. MSHA lists sampling methods for each contaminant in Chapter 3 of this manual.
5. Inspectors should then determine whether the surveys are being conducted as frequently as necessary using the criteria in section III.
6. Inspectors must make a compliance determination based on the facts and information collected from evaluating the operator's activities, or lack thereof. A compliance determination can be made by the inspector individually or in collaboration with the Agency's health and technical staff.
7. A sample checklist is provided in Appendix 6A to assist in determining compliance with 30 C.F.R. §§ 56/57.5002.
8. The scenarios in Appendix 6B provide common situations with recommended dispositions and Appendix 6C provides sample citations, when warranted, based on those applicable scenarios.

9. When multiple violations exist, only one citation will be issued. However, the inspector must list all of the air contaminants for which surveys are not being conducted.

Appendix 6A

30 C.F.R. §§ 56/57.5002 Sample Compliance Checklist

1. What are the air contaminants that may require surveys? Exclude diesel particulate matter and radon.
(For Example: type of material mined, previous MSHA exposure sampling, on-site MSDSs, etc.)

2. Is the operator conducting one or more of the following surveys for air contaminants?
How frequently are they being conducted?

Survey Type	Yes/No	Air Contaminant(s)	Frequency
Exposure Sampling (quantitative)			
Workplace Inspections (qualitative)			
Equipment Inspections (qualitative)			
Injury, Illness, & Incident Tracking			
Miner Interview and Input			
Occupational Health Assessments			
Other Survey Methods			

3. Does the operator use one or more of the following criteria to determine frequency?

Parameter that Impacts Frequency	Yes/No
Sample results	
Changes in the job/task/equipment	
Changes to the hazard (process)	
Results of inspections	
Miner input	
Injury/illness/incident reports	

Appendix 6B

Scenarios

Note: These scenarios are examples only. These determinations are not requirements. Because mines are ever changing, the inspector must determine how that mine actually complies with the standard based on the current facts.

- **Scenario 1:** An inspector is inspecting a metal mine where mercury (Hg) and hydrogen sulfide (H₂S) by-products are known to exist and there is the potential for exposure. There is no history of overexposures to either contaminant from MSHA's compliance sampling results. The inspector asks the operator if he is doing surveys for mercury and hydrogen sulfide to ensure controls are adequate. The operator stated that he has never considered the need to conduct surveys and has no idea of the health hazards related to mercury or hydrogen sulfide. The miners state that surveys have never been done. Finally the operator acknowledges the presence of the chemicals and that he knows there is a standard but states again that he didn't see a need to conduct any surveys.

A 56/57.5002 citation is warranted since it is clear that the operator is not doing any surveys. Note that this is determined regardless of any 56/57.5001 exposure sampling the inspector may or may not conduct during the inspection to determine compliance with the TLVs. Negligence may be "high" because the operator knew (or should have known) of the existence of the chemicals and that surveys were not being conducted and there are no mitigating circumstances. Note that only one citation would be issued, listing both contaminants.

- **Scenario 2:** At an underground lead mine, an inspector takes a personal air sample for lead to determine compliance under 57.5001(a), and also asks for evidence of surveys being conducted in accordance with 57.5002. The operator states that they do not take any lead air samples. However, the operator states that miners take annual physicals where blood lead levels are assessed. The operator also says that the ventilation and dust collection systems are inspected and serviced routinely and are all working according to manufacturer's specifications. Finally, the operator states that supervisors conduct daily walk-through inspections to ensure that no unsafe conditions exist. Upon analysis of the MSHA air samples, there is no overexposure for lead under section 57.5001(a).

In this scenario, it is clear that surveys are being conducted even though the operator has not conducted its own industrial hygiene exposure sampling. The operator is conducting occupational health surveillance as well as equipment and workplace inspections. These surveys are also being conducted as frequently as necessary to verify adequacy of controls, which is supported by the inspector's sampling results. The operator is in compliance with section 57.5002.

- **Scenario 3a:** The inspector takes samples at a large aggregate mine for respirable silica dust and also asks the operator for evidence of any surveys conducted. The operator shows the inspector his past three years of exposure sampling which includes routine sampling of the miners in those jobs where silica exposures are expected. The mine operator has identified those jobs that have potentially high silica exposures and has also periodically recorded their low personal exposures. The MSHA sampling results are received and one sample indicates an exposure greater than the TLV times the error factor which results in a citation being issued for a violation of section 56.5001(a).

In this scenario, there is sufficient evidence that the operator is conducting surveys as frequently as necessary to determine the adequacy of controls. The operator has demonstrated a functional exposure assessment strategy by monitoring and recording results of those miners with potential exposures to silica. Note however that even though the inspector issued a citation for a violation of section 56.5001(a) for the single overexposure, the operator is in compliance with section 56.5002 because the exposure assessment system appears sufficiently frequent to determine the adequacy of controls.

- **Scenario 3b:** Similar to the previous aggregate mine scenario (3a), an operator states he has taken two respirable silica dust samples but none in the past year. Only those two samples are given as evidence of surveys that have been conducted in the past three years. The mining method produces silica dust and the operator's two samples showed exposures near the TLV. The inspection notes visible airborne dust and accumulations. An MSHA personal air sampling result indicates an overexposure to silica with subsequent issuance of a citation for violation of section 56.5001(a).

The facts suggest that although surveys are being conducted, they are not being conducted as frequently as necessary to determine the adequacy of controls for this mining method, as evidenced by the visible dust and accumulations and the operator's own sample results. In this case, the inspector would issue a citation under section 56.5002, inasmuch as the violation is supported by the MSHA sample.

- **Scenario 4:** During an underground (UG) mine inspection, a miner is discovered welding in a shop. The inspector notes that the engineering local exhaust ventilation (LEV) fume/dust controls are not performing in accordance with the manufacturer's specifications. The inspector determines through observation and operator interview that surveys are not being conducted to ensure satisfactory LEV performance and determine the miner's welding fume exposure. In addition, the inspector immediately takes a personal welding fume sample and later finds that the iron oxide fume concentration exceeds the TLV mandated in accordance with section 57.5001(a).

The operator was not conducting any qualitative or quantitative surveys. Although an exposure exceeding the TLV is not required to determine non-compliance with 57.5002, it supports the evidence that the operator is not conducting surveys or not conducting them as frequently as necessary to ensure the adequacy of the controls. Along with a 57.5001(a) violation, the evidence supports a citation for a violation of section 57.5002 in this scenario.

- **Scenario 5:** An inspector was investigating an injury report where a miner was hospitalized for carbon monoxide poisoning. Upon completion of the investigation, the inspector determined that an overexposure more than likely occurred due to an inadequately ventilated gasoline-powered air compressor. The compressor was in a shop and provided pneumatic air to a hand-held sander. The compressor has a plate indicating it should not be used in an enclosed area due to potential exposure to carbon monoxide. The inspector did not take an exposure sample since the incident had already occurred, but he determined that no surveys for carbon monoxide had been conducted during the operation of the compressor.

Based on the evidence that no surveys for CO were conducted, a citation for a violation of section 56.5002 would be warranted. In addition, the Injury/Illness would be listed as Occurred and Fatal since carbon monoxide poisoning could have resulted in death. This would result in an S&S citation. In this scenario, the Negligence would be High since the operator knew or should have known (by the info on the plate) of the potential hazard and did not conduct surveys to determine the adequacy of controls to ensure miners' exposures did not exceed the TLV.

Appendix 6C

Example Citations and Terminations

Note: These Citations and Terminations correlated to the Scenarios are examples only. These determinations are not requirements. Because mines are ever changing, the inspector must determine how the mine actually complies with the standards based on the current facts.

Scenario 1.....	Page 6A-6, 7
Scenario 3b.....	Page 6A-8, 9
Scenario 4.....	Page 6A-10, 11
Scenario 5.....	Page 6A-12, 13

Mine Citation/Order

APPENDIX 6C

U.S. Department of Labor
Mine Safety and Health Administration

Section I—Violation Data

1. Date Mo Da Yr Jan 10, 2013	2. Time (24 Hr. Clock) 13:30	3. Citation/ Order Number 1000014
4. Served To John Doe	5. Operator AAA Mining	
6. Mine Acme Mine	7. Mine ID 01-23456	(Contractor)
8. Condition or Practice		8a. Written Notice (103g) <input type="checkbox"/>

Scenario 1: In the SW corner of the plant chemical processes area there is a potential for exposure to mercury and hydrogen sulfide from the reactors when miners are taking temperature readings and/or working on the systems. The operator stated he has never conducted surveys. Miners on site also stated no surveys conducted. No evidence was available that surveys were being performed. The operator knew of the requirements under the standard but chose not to comply. The operator failed to conduct surveys as frequently as necessary to determine adequacy of controls.

EXAMPLE

See Continuation Form (MSHA Form 7000-3a) ☐

9. Violation A. Health <input type="checkbox"/> Safety <input type="checkbox"/> Other <input type="checkbox"/>	B. Section of Act	C. Part/Section of Title 30 CFR 56.5002
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Section II—Inspector's Evaluation

10. Gravity:				
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input checked="" type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>				
B. Injury or illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays Or Restricted Duty <input checked="" type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>				
C. Significant and Substantial: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				D. Number of Persons Affected: 3
11. Negligence (check one) A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input checked="" type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>				
12. Type of Action 104a		13. Type of Issuance (check one) Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>		
14. Initial Action A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/>		E. Citation/ Order Number		F. Dated Mo Da Yr
15. Area or Equipment				
16. Termination Due A. Date Mo Da Yr Jan 17, 2013				
B. Time (24 Hr. Clock) 13:30				


Section III—Termination Action

17. Action to Terminate	
18. Terminated A. Date Mo Da Yr	
B. Time (24 Hr. Clock)	

Section IV—Automated System Data

19. Type of Inspection (activity code) E01	20. Event Number 2000002	21. Primary or Mill <input type="checkbox"/> <input checked="" type="checkbox"/>
22. Signature		23. AR Number 1588

MSHA Form 7000-3, Apr 08 (revised) In accordance with the provisions of the Small Business Regulatory Enforcement Fairness Act of 1996, the Small Business Administration has established a National Small Business and Agriculture Regulatory Ombudsman and 10 Regional Fairness Boards to receive comments from small businesses about federal agency enforcement actions. The Ombudsman annually evaluates enforcement activities and rates each agency's responsiveness to small business. If you wish to comment on the enforcement actions of MSHA, you may call 1-888-REG-FAIR (1-888-734-3247), or write the Ombudsman at Small Business Administration, Office of the National Ombudsman, 409 3rd Street, SW MC 2120, Washington, DC 20416. Please note, however, that your right to file a comment with the Ombudsman is in addition to any other rights you may have, including the right to contest citations and proposed penalties and obtain a hearing before the Federal Mine Safety and Health Review Commission.

Mine Citation/Order Continuation		APPENDIX 6C		U.S. Department of Labor Mine Safety and Health Administration			
Section I--Subsequent Action/Continuation Data							
1. Subsequent Action 1a. Continuation <input checked="" type="checkbox"/> <input type="checkbox"/>		2. Dated (Original Issue) Mo Da Yr Jan 10, 2013		3. Citation/Order Number 1000014-1			
4. Served To John Doe		5. Operator AAA Mining					
6. Mine Acme Mine		7. Mine ID 01-23456 (Contractor) <input type="checkbox"/>					
Section II--Justification for Action							
<p>The mine operator is conducting surveys to determine the adequacy of control measures to ensure miners are not overexposed.</p> <div style="text-align: center; font-weight: bold; font-size: 1.2em; margin-top: 100px;">EXAMPLE</div>							
See Continuation Form <input type="checkbox"/>							
Section III--Subsequent Action Taken							
8. Extended To A. Date Mo Da Yr		B. Time (24 Hr. Clock)		<input type="checkbox"/> C. Vacated <input checked="" type="checkbox"/> D. Terminated <input type="checkbox"/> E. Modified			
Section IV--Inspection Data							
9. Type of Inspection E15		10. Event Number 2000002					
11. Signature		AR Number 1588		12. Date Mo Da Yr Jan 17, 2013		13. Time (24 Hr. Clock) 12:00	

MSHA Form 7000-3a, Mar 85 (revised)

Mine Citation/Order

APPENDIX 6C

U.S. Department of Labor
Mine Safety and Health Administration

Section I—Violation Data

1. Date Mo Da Yr Jan 8, 2014	2. Time (24 Hr. Clock) 14:30	3. Citation/ Order Number 1000015
4. Served To Bob Smith	5. Operator Red River Mining	
6. Mine Canyon Mine	7. Mine ID 12-98765	(Contractor)
8. Condition or Practice		8a. Written Notice (103g) <input type="checkbox"/>

Scenario 3b: The mine operator failed to conduct dust surveys as frequently as necessary to determine the adequacy of control measures. The mining process emits silica-bearing dust. Clouds of visible airborne dust were observed along with one inch thick settled accumulations on surfaces. MSHA sampling 12/20/2013 revealed an overexposure to respirable silica-bearing dust. The previous two dust samples taken by the operator within the last three years showed high levels of silica and were not frequent enough to determine if the controls in place were adequate.

EXAMPLE

See Continuation Form (MSHA Form 7000-3a) ☐

9. Violation	A. Health <input type="checkbox"/> Safety <input type="checkbox"/> Other <input type="checkbox"/>	B. Section of Act	C. Part/Section of Title 30 CFR 56.5002
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Section II—Inspector's Evaluation

10. Gravity:				
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input checked="" type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>				
B. Injury or illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays Or Restricted Duty <input checked="" type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>				
C. Significant and Substantial: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				D. Number of Persons Affected: 10
11. Negligence (check one) A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>				
12. Type of Action 104a		13. Type of Issuance (check one) Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>		
14. Initial Action A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/>		E. Citation/ Order Number		F. Dated Mo Da Yr
15. Area or Equipment				
16. Termination Due A. Date Mo Da Yr Jan 28, 2014 B. Time (24 Hr. Clock) 23:59				

Section III—Termination Action

17. Action to Terminate	
18. Terminated A. Date Mo Da Yr B. Time (24 Hr. Clock)	

Section IV—Automated System Data

19. Type of Inspection (activity code) E01	20. Event Number 2000001	21. Primary or Mill <input checked="" type="checkbox"/> <input type="checkbox"/>	23. AR Number 1689
22. Signature			

MSHA Form 7000-3, Apr 08 (revised) In accordance with the provisions of the Small Business Regulatory Enforcement Fairness Act of 1996, the Small Business Administration has established a National Small Business and Agriculture Regulatory Ombudsman and 10 Regional Fairness Boards to receive comments from small businesses about federal agency enforcement actions. The Ombudsman annually evaluates enforcement activities and rates each agency's responsiveness to small business. If you wish to comment on the enforcement actions of MSHA, you may call 1-888-REG-FAIR (1-888-734-3247), or write the Ombudsman at Small Business Administration, Office of the National Ombudsman, 409 3rd Street, SW MC 2120, Washington, DC 20416. Please note, however, that your right to file a comment with the Ombudsman is in addition to any other rights you may have, including the right to contest citations and proposed penalties and obtain a hearing before the Federal Mine Safety and Health Review Commission.

Mine Citation/Order
Continuation**APPENDIX 6C**U.S. Department of Labor
Mine Safety and Health Administration

Section I—Subsequent Action/Continuation Data

1. Subsequent Action 1a. Continuation <input checked="" type="checkbox"/> <input type="checkbox"/>	2. Dated (Original Issue) Jan 8, 2014	3. Citation/ Order Number 1000015-1
4. Served To Bob Smith	5. Operator Red River Mining	
6. Mine Canyon Mine	7. Mine ID 12-98765	(Contractor) <input type="checkbox"/>

Section II—Justification for Action

The mine operator has increased the frequency of surveys necessary to adequately control miners' exposure to respirable silica-bearing dust. (Furthermore, the analytical result of MSHA's 01/14/2014 re-sampling determined no overexposure to respirable silica-bearing dust).

EXAMPLESee Continuation Form ☐

Section III—Subsequent Action Taken

8. Extended To	A. Date Mo Da Yr	B. Time (24 Hr. Clock)	<input type="checkbox"/> C. Vacated	<input checked="" type="checkbox"/> D. Terminated	<input type="checkbox"/> E. Modified
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Section IV—Inspection Data

9. Type of Inspection E15	10. Event Number 2000001
11. Signature	AR Number 1689
12. Date Mo Da Yr Jan 28, 2014	13. Time (24 Hr. Clock) 17:00

MSHA Form 7000-3a, Mar 85 (revised)

Mine Citation/Order		APPENDIX 6C		U.S. Department of Labor Mine Safety and Health Administration	
Section I—Violation Data					
1. Date	Mo Da Yr Jan 14, 2014	2. Time (24 Hr. Clock)	16:50	3. Citation/ Order Number	1000017
4. Served To	Mark Sharp		5. Operator	Mountain Mining Inc.	
6. Mine	Whistle Mine		7. Mine ID	15-54321	(Contractor)
8. Condition or Practice				8a. Written Notice (103g) <input type="checkbox"/>	
<p>Scenario 4: The operator failed to conduct surveys to determine the adequacy of the LEV control measures or the personal exposure levels of a miner performing welding. At the time of the inspection the UG shop ventilation fans located near the work bench were not functional and welding fumes were not being drawn away from the miner's breathing zone. The operator had not been conducting surveys. The miner was sampled by MSHA on 1/3/2014 with results revealing an overexposure to iron oxide fumes.</p> <p style="text-align: center; font-weight: bold; font-size: 1.2em;">EXAMPLE</p>					
See Continuation Form (MSHA Form 7000-3a) <input type="checkbox"/>					
9. Violation	A. Health <input type="checkbox"/> Safety <input type="checkbox"/> Other <input type="checkbox"/>	B. Section of Act	C. Part/Section of Title 30 CFR	57.5002	
Section II—Inspector's Evaluation					
10. Gravity:					
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input checked="" type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input type="checkbox"/>					
B. Injury or illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays Or Restricted Duty <input checked="" type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input type="checkbox"/>					
C. Significant and Substantial: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
D. Number of Persons Affected: 1					
11. Negligence (check one) A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input checked="" type="checkbox"/> D. High <input type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>					
12. Type of Action 104a					
13. Type of Issuance (check one) Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>					
14. Initial Action					
A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/> E. Citation/Order Number <input type="text"/> F. Dated Mo Da Yr <input type="text"/>					
15. Area or Equipment <input style="width: 100%; height: 30px;" type="text"/>					
16. Termination Due					
A. Date Mo Da Yr Jan 28, 2014 B. Time (24 Hr. Clock) 17:00					
Section III—Termination Action					
17. Action to Terminate <input style="width: 100%; height: 30px;" type="text"/>					
18. Terminated					
A. Date Mo Da Yr <input type="text"/> B. Time (24 Hr. Clock) <input type="text"/>					
Section IV—Automated System Data					
19. Type of Inspection (activity code)		20. Event Number		21. Primary or Mill	
E01		2000003		<input checked="" type="checkbox"/> <input type="checkbox"/>	
22. Signature				23. AR Number	
				1689	

MSHA Form 7000-3, Apr 08 (revised) In accordance with the provisions of the Small Business Regulatory Enforcement Fairness Act of 1996, the Small Business Administration has established a National Small Business and Agriculture Regulatory Ombudsman and 10 Regional Fairness Boards to receive comments from small businesses about federal agency enforcement actions. The Ombudsman annually evaluates enforcement activities and rates each agency's responsiveness to small business. If you wish to comment on the enforcement actions of MSHA, you may call 1-888-REG-FAIR (1-888-734-3247), or write the Ombudsman at Small Business Administration, Office of the National Ombudsman, 409 3rd Street, SW MC 2120, Washington, DC 20416. Please note, however, that your right to file a comment with the Ombudsman is in addition to any other rights you may have, including the right to contest citations and proposed penalties and obtain a hearing before the Federal Mine Safety and Health Review Commission.

Mine Citation/Order
Continuation**APPENDIX 6C**U.S. Department of Labor
Mine Safety and Health Administration

Section I—Subsequent Action/Continuation Data

1. Subsequent Action 1a. Continuation <input checked="" type="checkbox"/> <input type="checkbox"/>	2. Dated (Original Issue) Mo Da Yr Jan 14, 2014	3. Citation/ Order Number 1000017-1
4. Served To Mark Sharp	5. Operator Mountain Mining Inc.	
6. Mine Whistle Mine	7. Mine ID 15-54321	(Contractor) <input type="checkbox"/>

Section II—Justification for Action

Surveys are being conducted of welding operations and the UG shop local exhaust ventilation engineering control fans have been replaced and are working to exhaust iron oxide fumes from the bench work area. (Results of MSHA re-sampling on 1/21/2014 indicate iron oxide fumes exposure below the Threshold Limit Value (TLV)).

EXAMPLESee Continuation Form ☐

Section III—Subsequent Action Taken

8. Extended To A. Date Mo Da Yr B. Time (24 Hr. Clock)	<input type="checkbox"/> C. Vacated <input checked="" type="checkbox"/> D. Terminated <input type="checkbox"/> E. Modified
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Section IV—Inspection Data

9. Type of Inspection E15	10. Event Number 2000003
11. Signature AR Number 1689	12. Date Mo Da Yr Jan 28, 2014
13. Time (24 Hr. Clock) 12:00	

MSHA Form 7000-3a, Mar 85 (revised)

Mine Citation/Order

APPENDIX 6C

U.S. Department of Labor
Mine Safety and Health Administration

Section I—Violation Data

1. Date Mo Da Yr Jan 25, 2013	2. Time (24 Hr. Clock) 10:50	3. Citation/ Order Number 1000018
4. Served To Mike Brown	5. Operator Star Mining	
6. Mine Sun Mine	7. Mine ID 04-45678	(Contractor)
8. Condition or Practice		8a. Written Notice (103g) <input type="checkbox"/>

Scenario 5: Dust, gas, mist, and fume surveys were not being conducted to determine the extent of exposure to airborne contaminant carbon monoxide (CO) in the mine shop where a gasoline-powered air compressor was being used to power a hand-held sander. The Production Manager ordered the compressor placed inside the mine shop due to icing problems in the air lines when located outdoors, ignoring visible warnings on the compressor and in the operators manual regarding risk of asphyxiation when used in an enclosed unventilated area. No surveys for CO were conducted during operation of the compressor. A miner was overcome by CO on 1/24/2013 at approximately 12:30 and was hospitalized for treatment. The Production Manager engaged in aggravated conduct constituting more than ordinary negligence in that he knew or should have known about surveys and miners were potentially exposed to CO. This violation is an unwarrantable failure to comply with a mandatory standard.

EXAMPLE

See Continuation Form (MSHA Form 7000-3a) ☐

9. Violation	A. Health Safety <input type="checkbox"/> Other <input type="checkbox"/>	B. Section of Act <input type="checkbox"/>	C. Part/Section of Title 30 CFR 56.5002
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Section II—Inspector's Evaluation

10. Gravity:				
A. Injury or Illness (has) (is): No Likelihood <input type="checkbox"/> Unlikely <input type="checkbox"/> Reasonably Likely <input type="checkbox"/> Highly Likely <input type="checkbox"/> Occurred <input checked="" type="checkbox"/>				
B. Injury or illness could reasonably be expected to be: No Lost Workdays <input type="checkbox"/> Lost Workdays Or Restricted Duty <input type="checkbox"/> Permanently Disabling <input type="checkbox"/> Fatal <input checked="" type="checkbox"/>				
C. Significant and Substantial: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				D. Number of Persons Affected: 1
11. Negligence (check one) A. None <input type="checkbox"/> B. Low <input type="checkbox"/> C. Moderate <input type="checkbox"/> D. High <input checked="" type="checkbox"/> E. Reckless Disregard <input type="checkbox"/>				
12. Type of Action 104(d)(1)		13. Type of Issuance (check one) Citation <input checked="" type="checkbox"/> Order <input type="checkbox"/> Safeguard <input type="checkbox"/> Written Notice <input type="checkbox"/>		
14. Initial Action A. Citation <input type="checkbox"/> B. Order <input type="checkbox"/> C. Safeguard <input type="checkbox"/> D. Written Notice <input type="checkbox"/>		E. Citation/ Order Number		F. Dated Mo Da Yr
15. Area or Equipment				

16. Termination Due	A. Date Mo Da Yr Jan 25, 2013	B. Time (24 Hr. Clock) 17:00
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Section III—Termination Action

17. Action to Terminate

18. Terminated	A. Date Mo Da Yr	B. Time (24 Hr. Clock)
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Section IV—Automated System Data

19. Type of Inspection (activity code) E07	20. Event Number 2000004	21. Primary or Mill <input checked="" type="checkbox"/> <input type="checkbox"/>	23. AR Number 4909
22. Signature			

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Mine Citation/Order
Continuation**APPENDIX 6C**U.S. Department of Labor
Mine Safety and Health Administration

Section I—Subsequent Action/Continuation Data

1. Subsequent Action 1a. Continuation <input checked="" type="checkbox"/> <input type="checkbox"/>	2. Dated (Original Issue) Mo Da Yr Jan 25, 2013	3. Citation/ Order Number 1000018-1
4. Served To Mike Brown	5. Operator Star Mining	
6. Mine Sun Mine	7. Mine ID 04-45678	(Contractor) <input type="checkbox"/>

Section II—Justification for Action

The mine operator has moved the gasoline-powered compressor outside and installed a continuous real-time carbon monoxide monitoring instrument for the work area and when tested the instrument functioned properly.

EXAMPLESee Continuation Form ☐

Section III—Subsequent Action Taken

8. Extended To	A. Date Mo Da Yr	B. Time (24 Hr. Clock)	<input type="checkbox"/> C. Vacated	<input checked="" type="checkbox"/> D. Terminated	<input type="checkbox"/> E. Modified
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Section IV—Inspection Data

9. Type of Inspection E15	10. Event Number 2000004
11. Signature	AR Number 4909
12. Date Mo Da Yr Jan 25, 2013	13. Time (24 Hr. Clock) 15:30

MSHA Form 7000-3a, Mar 85 (revised)